AD-A119 834 NAVY EXPERIMENTAL DIVING UNIT PANAMA CITY FL F/G 14/2
EVALUATION OF COMMERCIALLY AVAILABLE, WRIST-WORN DEPTH GAUGES.(U)
JUN 82 J R MIDDLETON, J F TOBIAS, B E WEBB
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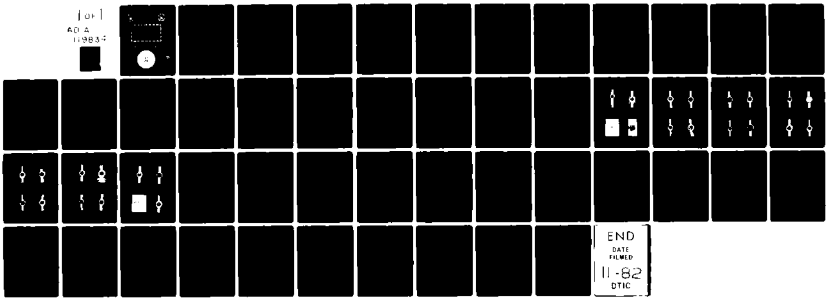

NAVY EXPERIMENTAL DIVING UNIT

DEPARTMENT OF THE NAVY
NAVY EXPERIMENTAL DIVING UNIT
PANAMA CITY, FLORIDA 32407

NAVY EXPERIMENTAL DIVING UNIT

(6)

REPORT NO. 2-82

EVALUATION OF COMMERCIALLY AVAILABLE, WRIST-WORN DEPTH GAUGES

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JUNE 1982

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A119 834	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) EVALUATION OF COMMERCIALLY AVAILABLE, WRIST-WORN DEPTH GAUGES		5. TYPE OF REPORT & PERIOD COVERED Test Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) JAMES R. MIDDLETON, JONATHAN F. TOBIAS, BILLY E. WEBB		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS NAVY EXPERIMENTAL DIVING UNIT PANAMA CITY, FLORIDA 32407		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE June 1982
		13. NUMBER OF PAGES 48
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Depth Gauge	Repeatability
Wrist-worn	Thermal Stability
Feet-of-seawater	Readability
Accuracy	

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Twenty-eight models of commercially available, diver, wrist-worn depth gauges were evaluated by the Navy Experimental Diving Unit. All gauges were tested to determine accuracy, repeatability, watertight integrity, thermal stability, durability, readability and luminescence capability. The depth gauges tested represented a comprehensive survey of the available market. Test results showed the vast majority of the models to have an accuracy of ±5 FSW. Under some test conditions, this degraded to ±10 FSW or greater. Two

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S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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Acknowledgements

The authors would like to express their appreciation to the following people for their contribution to the testing, data reduction and analysis that contributed to the production of this report.

Karen M. KOHANOWICH, Ensign, United States Navy

Eric RANDALL, Ensign, United States Navy

Jeffrey N. ZERBE, Ensign, United States Navy

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Glossary

Accuracy	The extent to which a given measurement agrees with the standard value for that measurement
Bourdon Tube	A pressurized sensing element with a curved or twisted metal tube, flatened in cross section and closed
°F	Degrees Fahrenheit
FSW	Feet-of-Seawater
Mil Spec	Military Specification MIL-G-15214C (Gauge, Depth, Wrist, MARK I, MOD 0, Nonmagnetic, Self-Luminous Dial, 30 March 1965)
NAVSEA	Naval Sea Systems Command
NEDU	Navy Experimental Diving Unit
NO.	Number
OPT	Optional
%	Percent
psig	Pounds per Square Inch Gauge
Repeatability	The extent to which a given measurement duplicates previous measurements taken under the same conditions.
USN	Unites States Navy
Watertight Integrity	Ability to prevent water leaks into and/or air/oil leaks out of

Abstract

Twenty-eight models of commercially available, diver, wrist-worn depth gauges were evaluated by the Navy Experimental Diving Unit. All gauges were tested to determine accuracy, repeatability, watertight integrity, thermal stability, durability, readability and luminescence capability. The depth gauges tested represented a comprehensive survey of the available market. Test results showed the vast majority of the models to have an accuracy of ±5 FSW. Under some test conditions, this degraded to ±10 FSW or greater. Two samples of each model were tested. In several cases, gauges marketed by different manufacturers actually had the same internal mechanism. Given the repeatability, size of the gauges, cost and manufacturing techniques available to the industry at the current time, no operational difference was perceived in the performance of any gauge evaluated. Once a calibration check has been performed, all are considered satisfactory for U.S. Navy SCUBA use, with the exception of special explosive ordnance disposal non-magnetic requirements.

I. INTRODUCTION

During January and February 1981, the Navy Experimental Diving Unit (NEDU) tested 28 commercially available, diver wrist-worn depth gauges in accordance with NAVSEA Task Number 79-6. The depth gauge, which allows monitoring of actual depth in FSW, is a vital apparatus on which the diver must depend at all times. Unmanned tests were performed to determine accuracy, repeatability, watertight integrity, thermal stability, durability, readability and luminescence capability on all depth gauges. Appendix A contains a list of gauges tested and the manufacturers.

The scope of these tests did not include cycle life testing of the gauges or the length of time a gauge may be expected to remain in calibration during normal use. Since Navy use of diver wrist-worn depth gauges requires frequent calibration checks these evaluations were not deemed necessary.

Capillary type depth gauges were not evaluated since there is no internal pressure sensing mechanism involved, and their accuracy is implicit in the design. The only limiting factor in a capillary gauge is that, since it follows Boyles Law, the graduations on the face of the gauge get very close together at depths beyond 60 FSW which effects readability.

II. EQUIPMENT DESCRIPTION

The 28 models tested are described in APPENDIX B and illustrated in FIGURES 1 through 28. The descriptions are those supplied in the manufacturers catalogs and represent features which they feel are unique to their model.

III. TEST PROCEDURE

A. Hyperbaric Chamber Tests:

1. Accuracy/Repeatability Tests (see definitions in glossary): Each gauge (two of each model) was compressed in an ambient temperature water bath (approximately 70°F) to its maximum working depth in a hyperbaric chamber. The water bath just covered the top of the gauges and was used to check for leaks. Accuracy readings were taken in 10 FSW increments on descent and ascent. Gauge readings were compared to a digital ASHCROFT 0-200 psig Digigauge ($\pm$ 0.05% accuracy). A total of three compression/decompression scenarios were recorded on each gauge to determine repeatability. Since the purpose of these tests was to evaluate the performance of new, previously unused gauges, cycle life testing consisting of numerous compressions to maximum depth was not conducted. Two gauges of each model were tested only during the Accuracy and Repeatability Tests. Therefore, one of each model was subjected to all phases of testing, while the other was tested only for accuracy and repeatability in 70°F water. This was done to give an indication of the quality control available in each model.

2. Watertight Integrity Tests: Gauges were observed for watertight integrity on all chamber and open-water dives.

3. Thermal Stability Tests: Each gauge (one of each model) was compressed to its maximum operating depth in both a 90°F and 32°F water bath in a hyperbaric chamber. Accuracy was recorded during descent and ascent in 10 FSW increments to determine if changes in accuracy were caused by thermal stress.

4. Durability Tests:

a. Each gauge (one of each model) was dropped from a height of three feet onto a concrete floor with the dial face up and then placed in a hyperbaric chamber for an accuracy test consisting of a single compression to its maximum operating depth while immersed in 70°F water. Accuracy was recorded during descent and ascent in 10 FSW increments to determine if changes in accuracy had been caused by impact. The test was designed to simulate the type of blow a depth gauge might receive while being moved from place to place in a diver's gear bag or if accidentally dropped.

b. In addition to the drop test, durability testing also consisted of inspecting each gauge for corrosion following salt water immersion.

NOTES:

(a) During all chamber tests, depth was controlled to within ± 0.23 FSW according to an ASHCROFT Digigauge.

(b) When evaluating the data tabulated in this report, account must be given to the error the testors make in reading the face of the gauge. The error in reading the depths from the face of the gauge was, at best, ± 1 FSW and, at worst ± 2 FSW. Thus, the best accuracy expected from any of these gauges would be in the range of ± 2 FSW.

B. Open-Water Tests:

1. Readability/Luminescence Tests: A test platform was constructed on which one of each gauge model was mounted. Following mounting, the gauge board was taken to 60 FSW in the Gulf of Mexico. A minimum of 8 Navy-qualified divers judged readability of all gauge models at depth on day and night dives. A questionnaire was filled out at depth by each diver on all dives. On night dives, readability was determined by each gauge's own luminescence after it had been activated by an incandescent, hand-held underwater light. The time of activation for the depth gauges was predetermined in a darkened lab by subjecting the gauges to different periods of direct incandescent light. A nominal time of 15 seconds was chosen to best satisfy overall luminous activation of the depth gauges. In order to standardize the readability testing, each diver's vision was required to be 20/20 or corrected to 20/20 by appropriate means. The distance from which the mounted depth gauges were read underwater was left to the diver's discretion.

IV. Results

A. Accuracy & Repeatability Tests:

The vast majority of gauges tested were accurate to within ± 5 to ± 10 FSW under most test conditions. Data showed the majority of gauges to be slightly more accurate during descent than ascent. Accuracy on most gauges was best at 70°F. One gauge was off by as much as 20 FSW. Since only two of each model gauge were tested it was not known whether or not performance of this gauge was indicative of this particular brand. However, this particular gauge was identical internally to several other brands which were off by only 2 to 5 FSW at 32°F. This highlights the difficulty in calibrating on a mass produced basis small, wide range depth gauges with current state-of-the-art techniques. These large variations, however, occurred for the most part in 32°F water, an extreme condition where conservative diving practices are already in order.

Three compression/decompression scenarios were run on two gauges of each model at 70°F and repeatability was ± 1 FSW for all gauges tested. In addition, most gauges posessed a constant degree of error factor i.e., the gauge varied from true depth by a relatively constant number of FSW. However, all gauges did read zero when on the surface.

Examination of the data also shows that most gauges had much better accuracy at depths of 130 FSW and shallower. Most gauges at 70°F were within ± 5 FSW accuracy to a depth of 130 FSW. Deeper than 130 FSW, accuracy diminished to between ± 5 FSW and ± 10 FSW for most models. This is important since 0 to 130 FSW is the depth range for the vast majority of SCUBA dives.

TABLE 1 Range of Error (FSW) vs Depth and Temperature, contains a summary of data taken under all test conditions for each gauge. Depths are divided into two depth ranges, 0-50 FSW and 51-200 FSW. The numbers contained in the blocks beside each model represent the minimum and maximum deviations in FSW from true depth for a particular depth range and water temperature. For example, the DACOR LFG-300 at 70°F between 0 and 50 FSW was always at least 5 FSW deeper than true depth and had a maximum deviation from a true depth of 7 FSW. Data is tabulated to a maximum depth in TABLE 1 of 200 FSW since 130 FSW is the maximum limit for open-circuit SCUBA diving in the U.S. Navy. APPENDIXES C1 and C2 and D1 and D2 contain a complete tabulation of data for each of the two gauges tested in every model at depths to 300 FSW.

NOTE: Data contained in APPENDIXES D1 and D2 is for the control gauges which were tested only at 70°F for accuracy and repeatability. The gauges tabulated in APPENDIXES C1 and C2 were also tested at 32 and 90°F, respectively, and dropped from 3 feet onto a concrete floor after the initial evaluation at 70°F. By comparing the data in APPENDIXES C1 and C2 with D1 and D2, there are many obvious differences between two gauges of the same model at the same depth. This provides a realistic indication of the comparative performance that a diver can expect from two identical gauges. Variations between the same gauge ranged from 0 to 15 FSW under identical test conditions. This made normal statistical analysis of the data impractical. Consequently, statistical data such as correlation coeffiants, standard diviations, linear regressions and degree of confidence are not included in the data presented.

TABLE 1

RANGE OF ERROR (FSW) VS DEPTH AND TEMPERATURE

	32°F		70°F		90°F		DURABILITY TEST 70°F	
	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW
DACOR SFG 150	1/2	1/5	2/4	2/10	3/5	5/11	2/3	2/10
DACOR LFG 150	3/5	3/7	4/5	5/10	4/6	5/11	7/9	7/12
DACOR SFG 300	0/1	0/4	0/2	10/-2	0/1	0/10	0/2	0/10
DACOR LFG 300	2/6	2/10	5/7	5/14	3/7	3/15	3/7	3/15
FARRALLON 04-1610	-1/-4	-3/-5	2/5	2/5	2/3	2/3	0/1	1/-1
FARRALLON 04-1630	6/8	1/5	0/2	0/-5	0/2	2/-5	1/3	0/3
FARRALLON 04-1620	0/5	1/6	1/7	4/7	1/5	2/7	5/-2	3/8
PARKWAYS 801900	1/2	1/3	1/4	2/4	0/2	1/4	0/0	0/7
PRINCETON TECTONICS DG-10	2/5	0/-8	1/5	8/-10	2/-1	6/-7	1/4	4/-7
SCUBAPRO 28-849	-1/-3	-2/-5	1/-1	0/5	1/-1	0/2	0/2	14/-8
SCUBAPRO 28-850	-1/1	0/2	2/-2	5/-2	0/3	3/7	1/-1	1/5
SCUBAPRO 28-503	1/6	1/-10	0/5	5/-10	5/-1	5/-5	2/5	5/-10
SCUBAPRO 28-012	0/-3	0/-8	0/2	6/-2	0/3	0/8	0/2	5/-1
SCUBAPRO 28-507	0/-5	0/-10	1/4	3/-13	0/1	1/-10	0/2	0/-10
SEAPRO DM-250	-10/-20	-10/-20	2/-1	2/-6	1/6	0/7	1/-10	1/-7
SEAQUEST 8010	1/4	+4/-5	5/-5	9/-2	1/5	6/-2	0/4	5/-1
SEAQUEST 8012	0/0	0/3	1/3	3/-5	7/-7	0/8	0/2	4/-2
SHERWOOD DG350	1/3	0/5	1/5	5/10	1/8	4/9	0/6	2/8
SPORTSWAY 1406	1/2	1/4	-1/-5	0/-11	0/2	0/4	1/3	0/3
SAS 2069	0/-3	0/-3	0/2	2/4	0/3	1/4	2/-1	0/4

TABLE I

RANGE OF ERROR (FSW) VS DEPTH AND TEMPERATURE (Continued)

	32°F		70°F		90°F		DURABILITY TEST 70°F	
	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW	0-50 FSW	51-200 FSW
SAS 2069	1/5	0/5	1/-2	1/-5	0/-4	1/-4	2/-1	4/-4
TEKNA T-2600	0/2	0/9	0/3	7/-4	0/-3	5/-3	0/2	6/-3
U.S. DIVERS 7044	1/2	0/2	2/2	0/2	1/2	0/2	1/2	0/2
U.S. DIVERS 7042	0/1	1/-4	0/2	2/-3	1/2	3/-1	0/1	1/-4
U.S. DIVERS 7043	-1/20	2/-2	2/-1	1/8	2/-1	2/5	0/1	0/4
U.S. DIVERS 7045	0/1	3/-3	0/2	1/5	0/1	2/5	0/2	1/3
WHITE STAG 51246	-5/-5	-4/-7	1/-1	1/-1	1/1	0/1	0/-1	0/0
WHITE STAG 51247	-9/-10	-3/-15	0/-7	0/-7	2/-2	2/-5	-1/-10	6/-8

B. Watertight Integrity Tests:

Each gauge was pressurized underwater a total of 14 times including 2 open-water dives. All gauges tested maintained 100% watertight integrity throughout the evaluation.

C. Thermal Stability Tests:

All models were evaluated in 32 and 90°F water, respectively, to determine the effects of thermal stress. At 32°F, there was a distinct trend observed where the majority of the gauges read shallower than they did at 70°F. Some varied by only 1 to 3 FSW, but several read as much as 10 to 15 FSW shallower at 32°F than measured at 70°F. In most cases however, the shift was not significant.

In 90°F water, the trend was reversed to a lesser degree. Most gauges gained 1 to 3 FSW over the 70°F reading, but no major accuracy changes were noted as was the case in 32°F water.

TABLE 1 provides a summary of the range of errors at 90 and 32°F. APPENDIXES E1, E2 and F1, F2 tabulate complete results for 90 and 32°F temperatures, respectively, for one gauge of each model tested.

D. Durability Tests:

All of the gauges passed the durability tests with minimal variations in accuracy and repeatability as compared to the 70°F tests.

No corrosion problems were observed with any gauge after salt water immersion as long as they were washed thoroughly in fresh water following each dive.

TABLE 1 summarizes the accuracy tests performed after the 3 foot drop to a concrete floor. APPENDIXES G1 and G2 gives a complete tabulation of accuracy data following the pressure drop test from 0 to 300 FSW.

E. Readability/Luminescence Tests:

All of the gauges tested were found to be adequately readable, i.e. ease of determining the actual depth reading from the dial face. In addition, all models which were advertised as being luminescent, were in fact, highly readable under low-light conditions after activation by an incandescent light source such as a divers hand held light. The gauges remained highly luminescent for approximately 5 minutes after activation. The only gauges tested which was not designed for luminesence were the DACOR SFG 150 and SFG 300.

V. Discussion.

Since 1965, depth gauges have been evaluated for accuracy according to MIL-G-15214C (see References). This specification was developed in order to build, under contract, an extremely accurate, nonmagnetic depth gauge

specifically for use by U.S. Navy Explosive Ordnance Disposal Divers. This Mil Spec called for a gauge accuracy of $\pm$ 1 FSW between 0 and 50 FSW and $\pm$ 3 FSW between 50 and 200 FSW. This is an extreme requirement and cannot be met by mass-produced, commercial depth gauges in price ranges generally considered affordable. Consequently, the gauges evaluated in this report are not compared to this Mil Spec.

The majority of the gauges tested read deeper than true depth under all test conditions. This is an obvious safety advantage to the diver from a decompression standpoint, but cannot be assumed carte blanc, since some models read shallower than true depth.

Importantly, when analysing the data contained in this report, remember that all models use a very similar mechanism for sensing pressure. Many gauges, marketed by different companies, are exactly the same gauge with different dial faces and commercial logos. This becomes significant when two models with the same internal mechanisms read $\pm$ 10 FSW different under identical test conditions. This makes it difficult to state categorically that one model is superior to another when, in fact, they may be exactly the same gauge.

In addition, test results showed repeatability of all gauges tested to be excellent (i.e. identical test conditions yielded nearly identical results on the same gauge after multiple compression/decompression scenarios). Consequently, any of the gauges tested may be used safely after comparing them to a known standard. This standard may be a calibration check in a hyperbaric chamber, use of a descent line marked in 10 FSW increments or comparing the gauge against known sea floor depths.

A 0 to 150 FSW depth gauge is commonly believed to be more accurate than a 0 to 300 FSW depth gauge in the 0 to 150 FSW range. The data in this report does not support this belief. While there is a definite trend in all gauges tested to become somewhat less accurate as depth increases, the deeper indicating gauges are normally as accurate as the shallower indicating gauges at corresponding depths.

Durability testing showed the rubber covers which protected all models against impact to be effective as long as the gauges were dropped in the dial face up position. This is significant since any blow to the side of a gauge is likely to cause the gears in the mechanism to jump and ruin its calibration permanently. This is considered reasonable and acceptable when considering the type of internal mechanisms found in these gauges. Any depth gauge should have a calibration check when it has been subject to an unusual shock or if performance is suspect for any reason. No corrosion problems were encountered during the evaluation.

Gauges were tested to a maximum depth of 300 FSW even though several models indicated depths substantially deeper, well beyond realistic safe limits with open-circuit SCUBA. The U.S. Navy Diving Manual limits open-circuit SCUBA dives to 130 FSW. No descernable difference was observed between types of sensing mechanisms, i.e. bourbon tube, diaphram or a

combination of the two. However, two models, the TEKNA T-2600 and the PRINCETON TECHTONICS DG-10 had a zero-adjust mechanism, which allows the gauge to be re-zeroed at altitude or specifically calibrated for a given depth. These features, while not affecting the overall accuracy as tested by NEDU, may be useful in special situations. However, important to note is that this re-zeroing capability does not correct these gauges for changes in decompression calculations considered inherent in altitude diving.

The FARALLON 04-1630 has a maximum depth indication feature which automatically records the maximum depth reached on a given dive. This could prove effective and become quite useful in a multi-depth dive scenario.

Several gauges had expanded scales at the shallower depths. While this feature definitely enhances readability, these gauges were found to be no more accurate than the other models tested.

Finally, important to understand is that depth gauges, either military or commercial, are delicate instruments and cannot be expected to maintain any degree of accuracy if not treated as such.

VI. CONCLUSIONS

The overall conclusions which can be drawn from the results of this test are as follows:

A. Accuracy of the vast majority of gauges tested was ± 5 FSW from 0 to 50 FSW and ± 10 FSW from 51 to 130 FSW under all test conditions.

B. While accuracy of identical depth gauges may vary from unit to unit, repeatability of all models tested is essentially the same.

C. Accuracy of current diver wrist-worn depth gauges is reasonable considering the state-of-the-art in manufacturing techniques and the unit price increase which would occur if a higher accuracy were required.

D. A custom calibration, i.e. a comparison of the depth gauge against a known standard on each individual gauge, should be performed by the user (including new gauges). This known standard may include hyperbaric chamber testing, a descent line marked in 10 FSW increments or by comparing the gauge against various known depth areas of the sea floor. The diver should then dive by his calibration sheet rather than the actual reading on the gauge.

E. Gauges should be checked for accuracy, at least, once every six months or any time the calibration is in question.

F. The fact that a depth gauge is reading zero on the surface and is correct at a known depth does not necessarily mean that its calibration is still intact over its entire depth range.

G. Commercially produced diver depth gauges are considered sufficiently accurate and durable for U.S. Navy use as long as the limitations outlined herein are recognized and the diver responds accordingly.

VII. REFERENCES

Military Specification MIL-G-15214C, Gauge, Depth, Wrist, Mark I Mod 0 Nonmagnetic, Self-Luminous Dial, 30 March 1965.

VIII. KEY TO APPENDIXES

The values in APPENDIXES C1 through G2 were obtained by comparing the test depth gauge to the ASHCROFT 0-200 psig Digigauge. If the difference between the test gauge compared to the Digigauge was shallow, it is represented by the corresponding value in negative FSW. If the difference was deeper, it is represented by the corresponding value in positive FSW.

The appendixes are subdivided into descending and ascending data with APPENDIX C1 containing descending data and APPENDIX C2 containing ascending data. APPENDIXES C1 through G2 are designated in this manner.

APPENDIX A

LIST OF GAUGES AND MANUFACTURERS

MANUFACTURER	MODEL NAME/NO.	ADDRESS
1. DACOR	SFG 150	DACOR CORPORATION 161 Northfield Road Northfield, IL 60093 (312) 446-9555
2. DACOR	LFG 150	
3. DACOR	SFG 300	
4. DACOR	LFG 300	
5. FARALLON	04-1610	FARALLON/OCEANIC 14275 Catalina Street San Leandro, CA 94577 (415) 352-5007
6. FARALLON	04-1630 200' MAX DEPTH GAUGE	
7. FARALLON	04-1620	
8. PARKWAY	801900	PARKWAY FABRICATORS, INC. 241 Raritan Street South Amboy, NJ 08879 (201) 721-5301
9. PRINCETON TECTONICS	DG-10	PRINCETON TECTONICS P.O. Box 8057 Trenton, NJ 08650 (609) 298-9331
10. SCUBAPRO	CAPSULE DEPTH GAUGE 150 FSW 28-849	SCUBAPRO USA 3105 E. Harcourt Rancho Dominguez, CA 90221 (213) 639-7850
11. SCUBAPRO	CAPSULE DEPTH GAUGE 230 FSW 28-850	
12. SCUBAPRO	ALTITUDE ADJUSTABLE DEPTH GAUGE 250 FSW 28-503	
13. SCUBAPRO	CAPSULE DEPTH GAUGE 325 FSW 28-012	
14. SCUBAPRO	ALTITUDE ADJUSTABLE DEPTH GAUGE 500 FSW 28-507	

APPENDIX A

LIST OF GAUGES AND MANUFACTURERS (Continued)

MANUFACTURER	MODEL NAME/NO.	ADDRESS
15. SEAPRO	DM-250	SEAPRO, INC. 18030 South Euclid Street Fountain Valley, CA 92708 (914) 979-6730
16. SEAQUEST	8010	SEAQUEST, INC. 722 Genevieve Street Suite N Solona Beach, CA 92075 (714) 979-6730
17. SEAQUEST	8012	
18. SHERWOOD	DG-350	SHERWOOD SELPAC CORP. 120 Church Street Lockport, NY 14094 (716) 433-3891
19. SPORTSWAYS	1406	WATERLUNG (SPORTSWAYS) P.O. Box 2407 Huntington Park, CA 90255 (213) 379-2491
20. SUB-AQUATIC SYSTEMS	2089	SUB-AQUATIC SYSTEMS P.O. Box 711 530 Sixth Street Hermosa Beach, CA 90254 (213) 379-2491
21. SUB-AQUATIC SYSTEMS	2069	
22. TEKNA	T-2600	TEKNA 3549 Haven Avenue Menlo Park, CA 94025 (415) 365-5112

APPENDIX A

LIST OF GAUGES AND MANUFACTURERS (Continued)

MANUFACTURER	MODEL NAME/NO.	ADDRESS
23. U.S. DIVERS	DEPTH MASTER II 7044	U.S. DIVERS COMPANY 3323 West Warner Avenue Santa Ana, CA 92702 (714) 540-8010
24. U.S. DIVERS	DEPTH MASTER I 7042	
25. U.S. DIVERS	DEPTH MASTER I 7043	
26. U.S. DIVERS	DEPTH MASTER II 7045	
27. WHITE STAG *	51246	OCEAN DYNAMICS INT. 363 W. Victoria Street Gardena, CA 90248 (213) 538-9540
28. WHITE STAG *	51247	

* WHITE STAG is now OCEAN DYNAMICS INTERNATIONAL

APPENDIX B

GAUGE DESCRIPTIONS

Manufacturer With Depth Gauge Model Number	Dial Markings	Gauge Range Feet	Gauge Graduations	Maximum Depth (Feet)	Maximum Depth (Meters)	Luminous Dial Face	Decompression Zone Colored	Face Size	Oil Filled (Silicone)	Mechanism	Housing	Strap	Replaceable Bezel
DACOR SFG 150	BLK	0-150	5'	150'	45	-	x	1 3/4"	x	B	P	R	-
DACOR LFG 150	BLK	0-150	5'	150'	45	x	x	2"	x	B	P	R	-
DACOR SFG 300	BLK	0-300	10'	300'	90	-	x	1 3/4"	x	B	P	R	-
DACOR LFG 300	BLK	0-300	10'	300'	90	x	x	2"	x	B	P	R	-
FARRALLON 04-1610	BLK	0-150	5'	150'	-	x	-	2"	x	B	R	R	-
FARRALLON 04-1630	BLK	0-200	5'	200'	-	x	-	2"	x	B	R	R	-
FARRALLON 04-1620	BLK	0-250	5'	250'	-	x	-	2"	x	B	R	R	-
PARKWAYS 801900	BLK	0-150	5'	150'	45	x	-	2"	x	B	P	V	-
PRINCETON TECTONICS DG-10	BLK	0-260	5'/10'	260'	-	x	-	2"	-	D	M	R	-
SCUBAPRO 28-849	BLK	0-150	5'	150'	-	x	-	2"	x	B	R	R	-
SCUBAPRO 28-850	BLK	0-230	5'	230'	-	x	-	2"	x	B	R	R	-
SCUBAPRO 28-503	BLK	0-250	5'	250'	-	x	-	2"	x	B	R	R	-
SCUBAPRO 28-012	BLK	0-300	5'	325'	-	x	-	2"	x	B	R	R	-
SCUBAPRO 28-507	WHT	0-500	5'	500'	-	-	-	2"	x	B	R	R	-
SEAPRO DM-250	BLK	0-250	5'	250'	-	x	x	2"	x	B	R	R	-
SEAQUEST 8010	BLK	0-150	5'	150'	-	x	x	2"	x	B	R	R	-
SEAQUEST 8012	BLK	0-250	5'	250'	-	x	x	2"	x	B	R	R	-
SHERWOOD DG-350	BLK	0-250	5'	250'	-	x	-	2"	x	B	P	V	-

KEY:
D - DIAPHRAM
B - BOURBON TUBE TYPE
R - RUBBER
M - METAL
P - PLASTIC
V - VELCRO

APPENDIX B

GAUGE DESCRIPTIONS (Continued)

Manufacturer With Depth Gauge Model Number	Dial Markings	Gauge Range Feet	Gauge Graduations	Maximum Depth (Feet)	Maximum Depth (Meters)	Luminous Dial Face	Decompression Zone Colored	Face Size	Oil Filled (Silicone)	Mechanism	Housing	Strap	Replaceable Bezel
SPORTSWAYS 1406	BLK	0-150	5'	150'	-	x	-	2"	x	B	R	R	-
SAS 2089	BLK	0-150	5'	150'	45 OPT	x	x	2"	x	B	P	R	-
SAS 2069	BLK	0-250	5'	250'	60 OPT	x	x	2"	x	B	P	R	-
TEKNA T-2600	BLK	0-240	5'	240'	-	x	-	2 1/2"	-	D	P	V	-
U.S. DIVERS 7044	BLK	0-150	5'	150'	-	x	-	2"	x	B	P	R	x
U.S. DIVERS 7042	BLK	0-150	5'	150'	-	x	-	2"	x	B	P	R	x
U.S. DIVERS 7043	BLK	0-250	10'	250'	60 OPT	x	-	2"	x	B	P	R	x
U.S. DIVERS 7045	BLK	0-250	10'	250'	-	x	-	2"	x	B	P	R	x
WHITE STAG 51246	BLK	0-150	5'	150'	-	x	-	2"	x	B	P	V	-
WHITE STAG 51247	BLK	0-250	5'	250'	-	x	-	2"	x	B	P	V	-

Figure 1. DACOR SFG 150

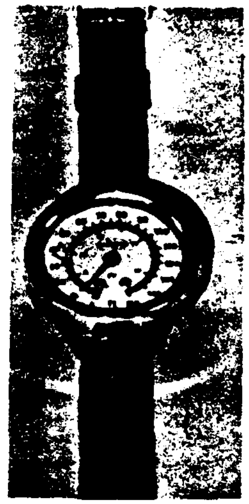

Figure 2. DACOR LFG 150

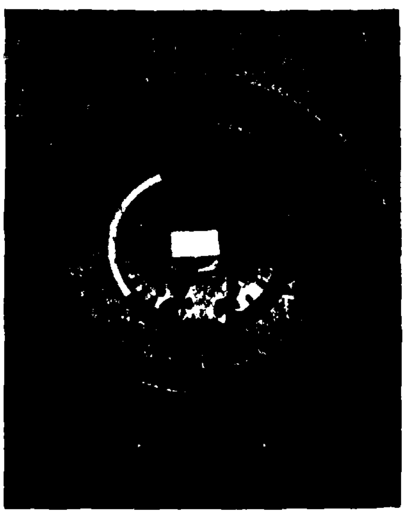

Figure 3. DACOR SFG 300

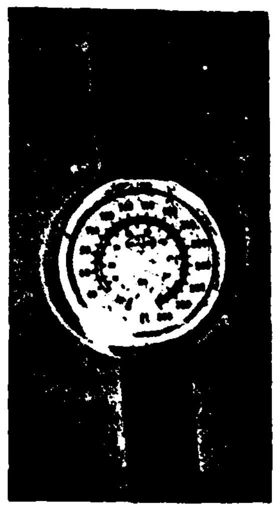

Figure 4. DACOR LFG 300

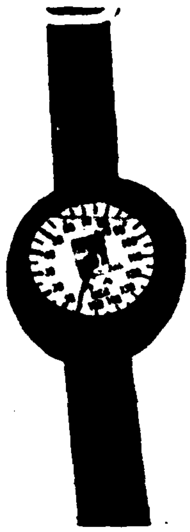

Figure 5. FARALLON 04-1610

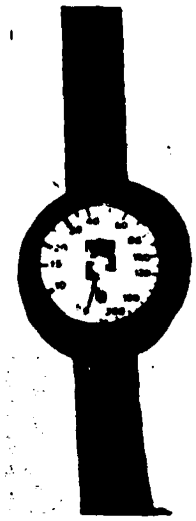

Figure 6. FARALLON 04-1630
200' MAX DEPTH GAUGE

Figure 7. FARALLON 04-1620

Figure 8. PARKWAYS 801900

Figure 9. PRINCETON TECTONICS DG-10

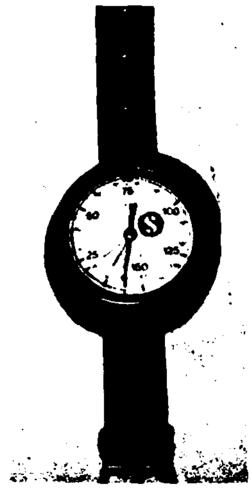

Figure 10. SCUBAPRO CAPSULE DEPTH GAUGE - 150' 28-849

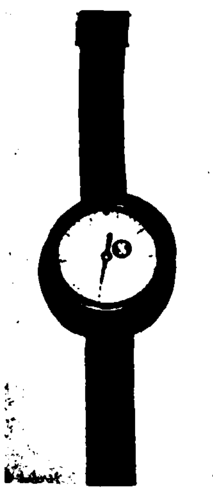

Figure 11. SCUBAPRO CAPSULE DEPTH GAUGE - 230' 28-850

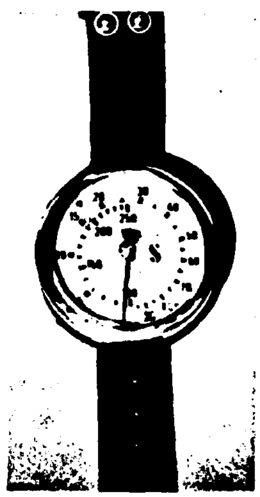

Figure 12. SCUBAPRO ALTITUDE ADJUSTABLE DEPTH GAUGE - 250' 28-503

Figure 13. SCUBAPRO CAPSULE DEPTH GAUGE - 325' 28-012

Figure 14. SCUBAPRO ALTITUDE ADJUSTABLE DEPTH GAUGE - 500' 28-507

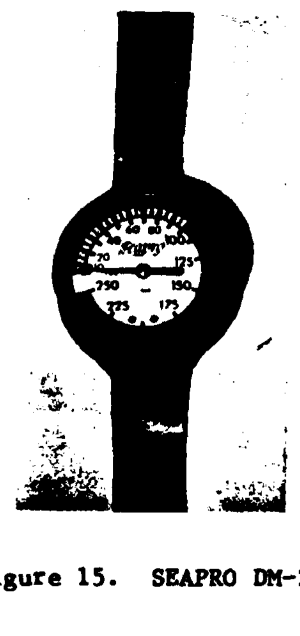

Figure 15. SEAPRO DM-250

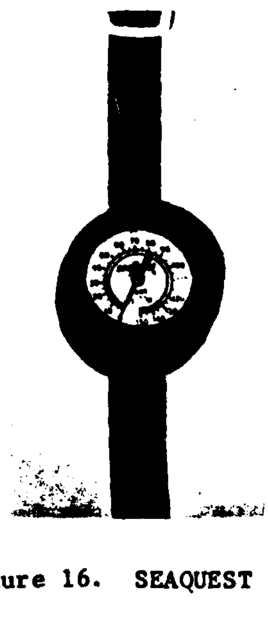

Figure 16. SEAQUEST 8010

Figure 17. SEAQUEST 8012

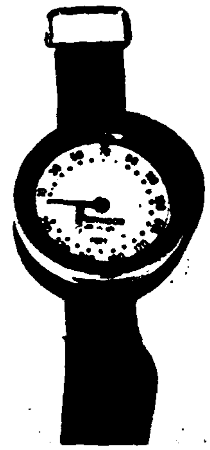

Figure 18. SHERWOOD DG-350

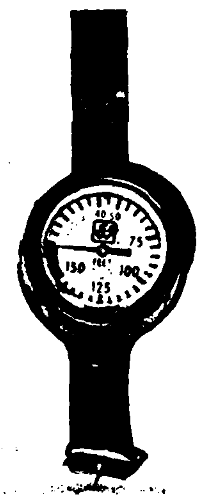

Figure 19. SPORTSWAY 1406

Figure 20. SUB-AQUATIC SYSTEMS 2089

Figure 21. SUB-AQUATIC SYSTEMS 2069

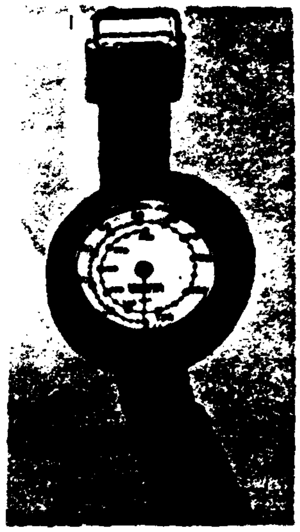

Figure 22. TEKNA T-2600

Figure 23. U.S. DIVERS DEPTH MASTER II 7044

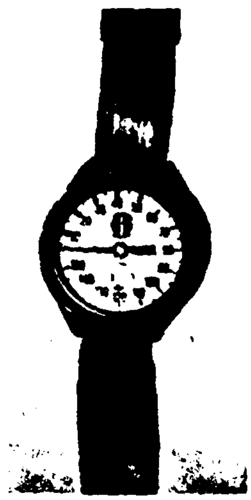

Figure 24. U.S. DIVERS 7042

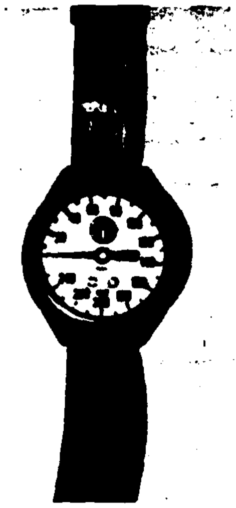

Figure 25. U.S. DIVERS 7043

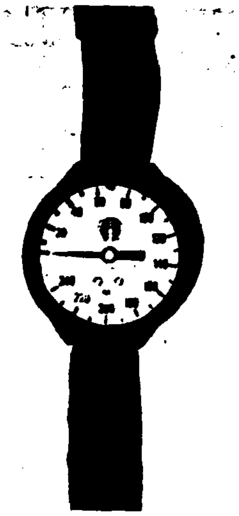

Figure 26. U.S. DIVERS DEPTH MASTER II 7045

Figure 27. WHITE STAG 51246

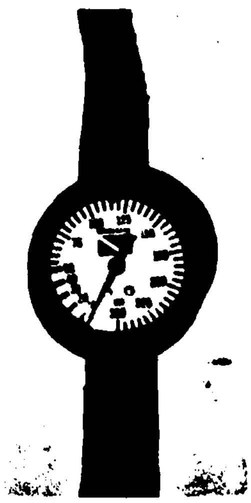

Figure 28. WHITE STAG 51247

APPENDIX C1

MAXIMUM DEVIATIONS - DESCENDING AT 70°F

DEPTH (FEET)*

GAUGE/ NUMBER	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
DACOR SFG 150	2	2	2	2	2	2	3	5	5	4	6	7	7	7	10
DACOR LFG 150	5	4	4	4	5	5	5	5	5	5	5	7	8	9	10
DACOR SFG 300	2	0	0	0	0	-1	-2	-2	-1	0	-1	-1	0	1	0
DACOR LFG 300	5	5	5	5	5	5	5	5	6	5	6	7	7	7	8
FARRALLON 04-1610	2	3	3	4	4	4	3	3	3	2	2	2	2	2	2
FARRALLON 04-1630	2	1	1	0	0	0	-1	-3	-4	-4	-5	-2	-2	-1	-5
FARRALLON 04-1620	1	1	4	5	7	5	5	5	5	5	5	5	5	5	7
PARKWAYS 801900	1	2	2	2	2	2	2	3	3	2	3	3	3	3	3
PRINCETON TECTONICS DG-10	1	2	3	2	2	3	2	-2	-1	-1	-1	-1	-2	-3	-5
SCUBAPRO 28-849	1	0	-1	0	0	0	0	0	0	0	0	0	0	0	5
SCUBAPRO 28-850	-2	0	1	1	1	2	-2	2	2	2	2	3	3	3	3
SCUBAPRO 28-503	1	0	1	3	2	3	3	1	0	0	0	-1	-1	-1	-3
SCUBAPRO 28-012	0	0	2	2	0	1	1	-2	-1	-2	-2	-2	-2	-2	-1
SCUBAPRO 28-507	2	2	2	1	2	1	1	-1	-1	-3	-4	-3	-5	-5	-9
SEAPRO DM-250	-1	-1	-1	-1	-1	-1	0	0	1	0	-1	-2	-2	-4	-3
SEAQUEST 8010	0	-5	5	4	5	3	5	5	5	5	2	-2	-2	-1	0
SEAQUEST 8012	1	1	1	2	2	2	3	2	2	2	2	2	1	1	0
SHERWOOD DG350	4	5	5	5	5	7	8	7	8	8	8	8	8	8	8
SHORTWAY 1406	-5	-4	-2	-2	-3	-3	-3	-4	-9	-4	-4	-2	-2	[illegible]	0
SAS 2089	0	1	1	1	1	2	2	2	2	2	2	2	3	4	3

GAUGE/ NUMBER	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150															
DACOR LFG 150															
DACOR SFG 300	1	2	1	2	2	5	2	5	7	8	9	10	10	10	4
DACOR LFG 300	8	9	8	9	9	10	10	17	10	11	11	12	14	14	12
FARRALLON 04-1610															
FARRALLON 04-1630	-1	-1	0	0	0										
FARRALLON 04-1620	5	5	4	4	4	4	4	4	4	4					
PARKWAYS 801900															
PRINCETON TECTONICS DG-10	-5	-5	-2	-3	-9	-5	-5	-9	-10	-9	-2				
SCUBAPRO 28-849															
SCUBAPRO 28-850	3	3	3	3	2	4	4	5							
SCUBAPRO 28-503	-5	-6	-10	-10	-10	-10	-10	-10	-10	-5					
SCUBAPRO 28-012	-2	-2	-2	-2	-2	0	0	2	2	2	4	5	5	5	5
SCUBAPRO 28-507	-10	-9	-10	-10	-10	-10	-10	-10	-10	-10	-6	-10	-11	-15	-11
SEAPRO DM-250	-4	-4	-3	-5	-4	-5	-5	-5	-5	-6					
SEAQUEST 8010															
SEAQUEST 8012	0	0	0	-1	-1	-1	-1	-1	-2	-5					
SHERWOOD DG350	8	7	6	8	7	5	8	5	5	5					
SHORTWAY 1406															
SAS 2089															

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX C1

MAXIMUM DEVIATIONS - DESCENDING AT 70°F (Continued)

GAUGE / NUMBER	DEPTH (FEET)* 10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-2	-2	-1	0	-1	0	0	1	1	1	0	0	-1	-2	-3	-2	-3	-2	-3	-3	-3	-2	-4	-5	-2					
TEKNA T-2600	0	-1	-2	-2	-3	-4	-3	-3	-3	-2	-1	0	0	1	1	2	1	1	2	-1	2	-1	-1	-5						
U.S. DIVERS 7044	2	2	2	2	2	2	2	1	1	0	0	0	1	0	1															
U.S. DIVERS 7042	0	1	1	2	2	1	1	1	0	0	-1	-1	-2	-3	-3															
U.S. DIVERS 7043	-1	0	0	0	1	2	2	2	2	3	4	4	4	4	4	4	5	5	5	5	5	2	1	1	1					
U.S. DIVERS 7045	0	0	0	0	1	2	4	2	3	3	2	3	3	3	4	4	4	3	3	3	2	4	2	1	4					
WHITE STAG 51246	-1	-1	-1	-1	1	-1	-1	1	1	1	0	0	0	-1	-1															
WHITE STAG 51247	-7	-3	-2	-1	-1	-1	-1	-1	-1	-2	-3	-2	-3	-2	-3	-3	-4	-4	-4	-4	-5	-5	-5	-7	-7					

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX C2

MAXIMUM DEVIATIONS - ASCENDING AT 70°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SEG 150	3	3	3	4	4	4	5	5	5	5	7	8	9	10																
DACOR LEG 150	5	5	5	5	5	5	5	5	5	6	6	8	8	10																
DACOR SEG 300	2	1	2	1	1	1	1	1	1	2	2	1	1	2	2	2	3	4	4	5	5	5	8	6	8	8	10	10	10	
DACOR LEG 300	6	5	7	5	7	5	7	5	8	6	7	8	8	8	9	9	10	10	10	10	10	10	11	10	12	12	12	13		
FARALLON 04-1610	3	4	4	5	5	5	4	4	4	3	3	3	3	3																
FARALLON 04-1630	2	1	2	2	0	0	0	0	0	-2	-1	0	0	-1	-5	-1	0	0	0											
FARALLON 04-1620	1	2	5	5	5	5	6	5	5	5	5	5	5	5	7	5	5	5	5	5	5	5	5	5						
PARKWAYS 801900	2	2	2	2	4	3	4	4	4	4	4	4	4	4																
PRINCETON TECTONICS DG-10	2	4	4	4	5	5	5	7	8	7	8	7	7	6	6	5	5	5	5	-1	5	5	-2	7	5					
SCUBAPRO 28-849	0	0	0	0	0	1	2	2	2	2	2	2	2	3																
SCUBAPRO 28-850	0	0	1	2	2	3	4	4	4	4	4	5	4	4	4	4	5	5	5	5	5	4								
SCUBAPRO 28-503	1	1	2	4	5	5	5	4	4	3	2	3	3	4	1	1	1	0	0	-1	0	0	-1	-2						
SCUBAPRO 28-012	0	0	2	2	2	2	2	2	2	1	2	2	2	2	2	0	2	3	2	2	2	3	5	5	5	5	6	5	5	
SCUBAPRO 28-507	2	2	2	3	4	3	2	2	1	0	-1	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-5	-5	-5	-10	-10	
SEAPRO DM-250	1	1	-1	1	2	1	1	1	1	2	1	1	1	0	1	1	-2	-2	-1	-1	-2	-3	-2	-6						
SEAQUEST 8010	3	5	5	5	5	5	5	5	5	9	2	0	-1	0																
SEAQUEST 8012	1	2	2	2	3	3	3	2	2	2	2	2	2	2	1	1	0	0	0	0	0	-1	0	1						
SHERWOOD DG-350	5	5	7	8	8	9	8	9	9	9	9	9	9	8	10	9	9	9	9	8	8	8	8	8						
SHOP TSUKA 1406	-5	-4	-2	-1	-2	-5	-5	-5	-10	-11	-2	-1	0	0																
SAS 2089	0	1	2	2	2	2	3	3	2	3	2	3	4	4																

* ALL GAUGES INDICATED 0 FSW WHILE ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX C2

MAXIMUM DEVIATIONS - ASCENDING AT 70°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-1	-1	0	0	1	1	2	1	2	1	1	1	1	1	0	0	-1	-2	-1	-1	-1	-5	-2	-3						
TEKNA T-2600	0	0	-1	-1	-2	-3	-2	-3	-2	-1	0	0	2	2	5	5	7	3	5	3	5	5	5							
U.S. DIVERS 7044	2	2	2	2	2	2	2	2	1	0	0	1	1	0																
U.S. DIVERS 7042	1	1	2	2	2	2	2	1	1	0	0	0	-2	-2																
U.S. DIVERS 7043	0	0	0	1	2	2	3	2	4	4	5	4	5	8	4	4	4	3	4	5	3	2	3	2						
U.S. DIVERS 7045	0	0	0	1	2	4	5	4	5	4	4	4	4	4	5	5	4	4	4	3	4	3	3	2						
WHITE STAG 51246	0	0	-1	0	0	0	1	0	0	0	0	-1	0	0																
WHITE STAG 51247	-6	-1	-1	-1	0	-1	-1	0	-1	0	-2	-1	-3	-3	-2	-3	-3	-4	-4	-4	-4	-5	-5	-5						

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX D1

MAXIMUM DEVIATIONS CONTROL GROUP - DESCENDING AT 70°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	2	2	1	1	1	1	1	2	3	3	4	5	6	7	7															
DACOR LFG 150	1	1	1	1	4	2	2	2	2	3	2	2	3	5	5															
DACOR SFG 300	1	0	1	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	1	1	1	1	2	1	2	2	2	2	2	2	3	2
DACOR LFG 300	2	3	5	5	5	5	6	7	8	8	9	10	10	10	10	11	12	12	12	15	16	16	18	18	[illegible]	20	20	20	30	30
FARRALLON 04-1610	1	2	2	2	2	2	2	2	2	2	2	3	3	2	2															
FARRALLON 04-1630	3	1	1	-1	-1	-2	-3	-5	-7	-7	-7	-5	-7	-4	-10	-3	-3	-2	-5	-5										
FARRALLON 04-1620	1	1	2	2	5	4	5	4	4	5	5	5	6	5	7	5	5	5	5	5	5	5	5	5	6					
PARKWAYS 801900	2	3	2	2	2	2	2	3	2	2	2	1	1	1	0															
PRINCETON TECTONICS DG-10	1	2	3	2	2	3	2	-1	0	-1	0	-1	-2	-2	-5	-2	-4	-4	-8	-9	-5	-5	-9	-10	-2	-2				
SCUBAPRO 28-849	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2															
SCUBAPRO 28-850	-1	0	1	1	1	2	3	2	2	1	2	2	3	2	1	1	1	1	0	0	0	0	0							
SCUBAPRO 28-503	1	3	3	5	4	4	3	1	1	1	0	0	-1	-1	-2	-5	-6	-8	-10	-10	-10	-10	-10	-10	-10					
SCUBAPRO 28-012	-3	-2	-2	-2	-2	-2	-1	-2	0	-1	0	3	0	1	0	0	0	1	0	2	1	1	2	2	2	3	4	4	4	5
SCUBAPRO 28-507	-1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	1	-2	0	-2	-3	-2	-5	-5	-5	-5	-5	-5	-5	-3	-4
SEAPRO DM-250	1	1	1	0	1	1	0	0	0	-1	-1	-2	-3	-3	-2	-3	-5	-4	-4	-4	-4	-3	-4	-3	-2					
SEAQUEST 8010	-2	-6	-5	-5	-6	-9	-10	-8	-10	-10	-11	-12	-15	-15	-15															
SEAQUEST 8012	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	0	0	0	0	1	0	1	-1	0	-1					
SHERWOOD DG350	1	2	1	3	3	4	4	4	4	4	5	4	5	5	5	5	5	5	7	5	8	9	8	25	25					
SPORTSWAY 1406	-8	-5	-5	-5	-5	-5	-5	-5	-10	-4	-5	-3	-5	-5	-4															
SAS 2089	ONLY ONE WAS TESTED																													

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX D1

MAXIMUM DEVIATIONS CONTROL GROUP - DESCENDING AT 70°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-8	-5	-4	-10	-4	-5	-5	-5	-5	-5	-10	-20	-30	-5	-5	-5	-6	-5	-6	-5	-6	-5	-5	-5	-5					
TEKNA T-2600	0	0	-2	-2	-3	-4	-3	-3	-3	-1	-1	0	0	1	0	1	-1	-1	-2	-2	-5	-5	-5	-8						
U.S. DIVERS 7044	1	1	2	2	2	3	3	3	3	3	2	2	2	2	3															
U.S. DIVERS 7042	-2	-2	-2	-3	-3	-4	-3	-4	-3	-3	-3	-3	-3	-3	-3															
U.S. DIVERS 7043	1	0	0	1	2	2	3	2	2	4	4	5	4	4	5	5	4	4	4	3	3	2	2	2	2					
U.S. DIVERS 7045	0	0	1	1	2	2	5	2	5	4	3	3	2	2	2	1	1	1	1	-1	-1	-1	-1	-1						
WHITE STAG 51246	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	0	0	0	0	0															
WHITE STAG 51247	-10	-2	-1	0	1	4	4	4	4	4	5	5	5	6	5	5	5	5	5	6	5	10	5	5	4					

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX D2

MAXIMUM DEVIATIONS CONTROL GROUP - ASCENDING AT 70°F

GAUGE/ NUMBER	DEPTH (FEET)* 10	20	30	40	50	60	70	80	90	100	110	120	130	140
DACON SFG 150	2	2	2	2	3	3	3	4	5	5	7	7	8	9
DACOR LFG 150	2	3	3	2	4	4	5	2	3	3	3	4	3	5
DACOR SFG 300	2	1	2	1	1	1	1	1	1	1	2	1	1	1
DACON LFG 300	5	5	5	5	7	5	5	8	7	9	9	10	10	11
FARRALLON 04-1610	1	2	3	3	4	3	3	3	3	3	4	4	4	4
FARRALLON 04-1630	3	1	1	0	-1	-1	-2	-3	-4	-5	-5	-2	-5	-5
FARRALLON 04-1620	1	1	3	3	4	5	5	5	5	5	6	5	7	6
PARKWAYS 801900	2	3	3	2	3	3	3	4	3	3	3	3	2	2
PRINCETON TECTONICS DG-10	2	4	4	4	5	6	6	8	9	8	9	7	7	6
SCUBAPRO 28-049	0	1	0	1	1	1	1	1	1	2	2	2	2	2
SCUBAPRO 28-050	-1	0	1	1	2	2	3	3	2	3	2	3	3	3
SCUBAPRO 28-503	1	3	3	5	5	6	5	5	5	5	2	3	3	4
SCUBAPRO 28-012	-1	-1	0	1	1	2	2	2	3	2	3	3	3	3
SCUBAPRO 28-507	1	1	1	2	3	3	3	4	3	2	2	2	2	2
SEAPRO DM-250	1	2	2	2	2	1	1	1	1	2	1	1	1	1
SEAQUEST 8010	10	12	12	14	11	12	11	12	10	10	5	1	2	5
SEAQUEST 8012	1	2	2	2	3	3	5	3	4	3	3	3	2	2
SHERWOOD DG350 **	MECHANISM FAILED ON INITIAL DESCENT													
SPORTSWAY 1406	-7	-5	-5	-5	-5	-5	-5	-5	-4	-2	-1	-2	-5	-2
SAS 2089 ***	ONLY ONE WAS TESTED													

GAUGE/ NUMBER	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACON SFG 150																
DACOR LFG 150																
DACOR SFG 300	2	1	2	2	2	2	2	2	2	2	2	3	3	2	4	
DACON LFG 300	10	12	12	14	14	15	15	17	17	18	18	20	20	20	00	
FARRALLON 04-1610																
FARRALLON 04-1630	-5	-3	-5	-2	-7											
FARRALLON 04-1620	9	5	6	7	7	8	7	7	6	6						
PARKWAYS 801900																
PRINCETON TECTONICS DG-10	5	5	4	4	3	3	3	3	-3	2	5					
SCUBAPRO 28-049																
SCUBAPRO 28-050	2	3	3	3	2	2	2	2								
SCUBAPRO 28-503	1	0	0	0	0	-1	0	0	-1	-2						
SCUBAPRO 28-012	3	0	3	4	3	3	3	4	5	5	5	5	6	5	5	
SCUBAPRO 28-507	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	
SEAPRO DM-250	0	1	-1	-2	1	1	1	-3	0	-1						
SEAQUEST 8010																
SEAQUEST 8012	1	1	1	1	1	1	1	1	9	1						
SHERWOOD DG350 **																
SPORTSWAY 1406																
SAS 2089 ***																

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

** MECHANISM JAMMED AT 30 FSW ON INITIAL TEST RUN. NO FURTHER TESTING POSSIBLE.

*** ONLY ONE GAUGE WAS SUPPLIED BY DISTRIBUTOR. UNABLE TO PROCURE SECOND GAUGE PRIOR TO TESTING.

APPENDIX D2

MAXIMUM DEVIATIONS CONTROL GROUP - ASCENDING AT 70°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-5	-2	-4	-3	-3	-4	-4	-4	15	5	-3	-5	-4	-4	-4	-4	-5	-5	-5	-4	-4	-7	-5	-9						
TEKNA T-2600	1	0	-1	-1	-2	-3	-1	-2	-1	-1	1	0	2	1	2	2	5	0	0	0	-1	-1	-2							
U.S. DIVERS 7044	4	1	2	2	3	3	4	3	4	3	3	3	2	2																
U.S. DIVERS 7042	-3	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3																
U.S. DIVERS 7043	0	0	1	2	3	3	4	4	4	4	4	4	5	5	4	4	4	4	4	5	4	3	3	2						
U.S. DIVERS 7045	0	1	1	1	4	4	5	3	4	4	3	3	2	2	2	3	2	1	0	-1	0	0	0	-1						
WHITE STAG 51246	-1	0	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0																
WHITE STAG 51247	-5	0	-1	1	4	4	5	5	6	6	6	6	7	7	7	7	6	5	6	6	5	5	5	5						

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX E1

MAXIMUM DEVIATIONS - DESCENDING AT 90°F

GAUGE/ NUMBER	DEPTH (FEET)* 10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	3	4	3	3	5	5	5	5	6	6	7	8	10	11	00															
DACOR LFG 150	4	4	4	4	5	5	6	6	6	8	8	9	10	11	00															
DACOR SFG 300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	1	2	2	2	3	4	8	10	10	10	10	00
DACOR LFG 300	5	4	5	3	4	3	5	4	6	5	6	7	8	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	15	00
FARRALLON 04-1610	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2															
FARRALLON 04-1630	0	0	1	0	0	0	0	0	0	-1	-2	-2	-1	-1	-2	-1	0	0	-5	0										
FARRALLON 04-1620	1	1	2	2	3	3	4	4	5	4	4	3	4	3	4	4	3	3	5	4	3	5	4	4	2					
PARKWAYS 801900	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3															
PRINCETON TECTONICS DG-10	0	1	0	0	-1	-1	-1	-2	-2	-2	-3	-2	-3	-2	-5	-2	-5	-3	-5	-6	-3	-3	-7	-5	-2					
SCUBAPRO 28-849	1	1	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2															
SCUBAPRO 28-850	1	0	1	1	1	2	2	2	2	3	2	3	3	3	3	3	3	4	4	3	5	5	5							
SCUBAPRO 28-503	-1	-1	0	5	1	2	2	0	0	0	-1	-1	-2	-2	-2	-5	-5	-7	-7	-8	-10	-10	-10	-8	-8					
SCUBAPRO 28-012	0	0	2	1	0	1	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	4	5	5	5	6
SCUBAPRO 28-507	0	0	0	0	0	0	0	0	1	-2	-5	-5	-8	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
SEAPRO DM-250	1	1	2	3	4	3	4	4	3	4	2	3	3	3	3	2	2	1	0	1	0	0	0	·0	0					
SEAQUEST 8010	1	4	4	3	3	4	5	5	4	3	2	-2	0	0	0															
SEAQUEST 8012	1	1	-7	3	5	5	7	5	5	5	5	5	4	4	2	2	1	2	1	2	1	0	0	0	0					
SHERWOOD DG350	1	4	4	5	6	8	7	8	7	8	8	8	8	7	7	7	7	7	7	7	7	6	5	6	4					
SPORTSWAY 1406	2	2	1	1	1	1	1	1	4	2	1	0	0	0	1															
SAS 2089	0	1	1	1	1	1	2	2	2	2	2	2	3	3	3															

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX E1

MAXIMUM DEVIATIONS - DESCENDING AT 90°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-4	-2	-2	-2	-1	-2	-1	0	0	0	-2	0	-1	-1	-3	-4	-3	-4	-3	-4	-3	-3	-3	-4	-3					
TEKNA T-2600	-1	-2	-2	-3	-3	-4	-3	-3	-2	-1	-2	0	0	0	0	0	0	0	0	0	0	-1	-2	0						
U.S. DIVERS 7044	1	1	1	1	1	1	1	1	1	0	0	1	1	1	2															
U.S. DIVERS 7042	1	1	1	2	2	2	2	2	2	1	1	1	0	-1	-2															
U.S. DIVERS 7043	-1	0	1	1	1	2	2	3	3	4	5	4	4	4	5	4	4	3	3	3	3	3	2	3	2					
U.S. DIVERS 7045	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	2					
WHITE STAG 51246	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1															
WHITE STAG 51247	-2	-1	0	0	0	2	2	2	2	0	1	2	2	2	0	0	0	0	0	0	-2	-3	-3	-3	-5					

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX E2

MAXIMUM DEVIATIONS - ASCENDING AT 90°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	4	5	5	5	5	5	5	6	7	8	9	10	11	11																
DACOR LFG 150	5	5	6	6	6	6	7	7	8	9	9	10	11	11																
DACOR SFG 300	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	2	2	2	5	8	7	8	9	10	12	10	10	9	
DACOR LFG 300	6	5	5	5	7	7	8	7	8	9	9	9	9	8	9	10	10	10	10	10	10	10	10	12	11	12	12	12	15	15
FARRALLON 04-1610	2	3	3	3	3	3	3	3	2	2	2	2	2	2																
FARRALLON 04-1630	2	2	2	2	1	2	0	0	0	0	0	0	0	0	1	1	1	0	0											
FARRALLON 04-1620	1	2	3	4	5	5	5	5	6	5	5	5	5	5	5	5	5	5	7	5	5	5	5	5						
PARKWAYS 801900	1	1	2	2	2	2	3	3	3	3	3	4	4	4																
PRINCETON TECTONICS DG-10	1	2	2	1	2	2	2	0	1	1	1	1	6	6	6	6	6	6	-1	-1	-1	-1	-7	-2						
SCUBAPRO 28-849	1	1	1	1	1	0	0	0	0	0	-2	-2	-2	-2																
SCUBAPRO 28-850	0	1	2	3	3	3	4	4	4	4	4	5	4	4	5	5	4	5	4	5	7	6								
SCUBAPRO 28-503	0	2	2	2	2	3	3	2	3	2	2	2	2	2	0	0	0	0	0	-1	-1	-2	-3	-5						
SCUBAPRO 28-012	1	1	1	3	3	4	4	4	3	8	7	4	3	2	1	1	3	4	3	4	4	5	4	5	5	6	5	5	5	
SCUBAPRO 28-507	0	1	1	0	0	0	0	0	1	0	-2	-1	-1	-2	-3	-5	-4	-1	-1	-1	-2	-1	0	0	-1	-10	-10	-10	-10	
SEAPRO DM-250	5	5	6	6	6	7	6	7	7	6	6	6	5	5	5	5	5	5	5	4	5	3	4	4						
SEAQUEST 8010	3	5	5	5	5	6	6	6	5	5	2	-1	1	1																
SEAQUEST 8012	5	4	5	5	7	8	7	8	8	8	8	7	5	5	5	5	3	2	2	2	2	2	2	2						
SHERWOOD DG350	5	6	7	8	8	8	8	9	8	9	9	9	9	8	9	8	8	9	8	8	8	8	7	8						
SPORTSWAY 1406	2	1	0	0	0	0	0	0	0	1	1	1	2	2																
SAS 2089	0	1	2	2	3	2	3	3	3	3	3	4	4	4																

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX E2

MAXIMUM DEVIATIONS - ASCENDING AT 90°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-1	0	0	-1	0	0	0	0	1	-1	0	0	0	0	0	-1	-2	-2	-2	-2	-2	-2	-3	-2						
TEKNA T-2600	0	0	-1	-2	-2	-3	-2	-2	0	0	1	1	1	2	2	3	2	2	2	2	5	3	5	2						
U.S. DIVERS 7044	2	2	1	2	2	2	2	2	1	1	2	2	2	2																
U.S. DIVERS 7042	1	2	2	2	2	3	2	2	2	2	2	1	1	-1																
U.S. DIVERS 7043	0	0	1	1	2	3	4	5	5	5	5	5	5	5	5	5	5	4	4	3	4	3	2	3						
U.S. DIVERS 7045	0	0	1	1	1	2	2	3	5	4	4	5	4	4	5	5	4	4	3	3	3	3	3	3						
WHITE STAG 51246	1	1	1	1	1	1	1	1	1	1	0	0	1	1																
WHITE STAG 51247	0	0	0	0	2	2	2	2	1	2	2	3	2	3	0	2	0	0	0	0	0	-2	-2	-3						

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX F1

MAXIMUM DEVIATIONS - DESCENDING AT 32°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	1	1	1	1	1	1	1	1	2	3	4	+5	+5	+5	00															
DACOR LFG 150	4	3	4	4	4	4	4	4	5	5	5	5	5	7	00															
DACOR SFG 300	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	2	3	2
DACOR LFG 300	5	2	4	3	2	3	2	2	2	2	2	2	2	2	2	2	4	4	6	7	9	9	10	10	10	10	10	10	10	00
FARRALLON 04-1610	-4	-3	-2	-2	-2	-3	-4	-4	-5	-5	-5	-5	-6	-5	-4															
FARRALLON 04-1630	6	7	6	7	6	2	2	1	1	1	1	0	2	1	2	1	2	2	2	0										
FARRALLON 04-1620	1	1	2	2	5	3	5	2	2	2	1	1	1	1	2	1	2	1	1	1	2	1	2	1	1					
PARKWAYS 801900	1	1	2	1	2	2	2	2	2	2	2	1	2	2	2															
PRINCETON TECTONICS DG-10	4	2	2	3	2	2	1	0	0	0	0	0	0	-2	0	-1	-2	0	-2	-2	-1	-1	-8	0	0	0				
SCUBAPRO 28-849	-1	-1	-2	-3	-3	-3	-3	-4	-4	-5	-5	-5	-5	-5	-5															
SCUBAPRO 28-850	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	1	0	1							
SCUBAPRO 28-503	3	3	5	5	1	1	5	3	1	1	1	0	0	0	0	-1	-2	-2	-6	-4	-10	-10	-10	0	-3					
SCUBAPRO 28-012	-1	0	-3	0	0	0	-2	-3	-3	-2	-4	-3	-5	-8	-4	-4	-5	-5	-4	0	-1	-4	-3	-4	-2	-7	-7	-3	-6	0
SCUBAPRO 28-507	0	4	5	5	5	4	2	0	0	0	0	-1	-4	-3	-7	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
SEAPRO DM-250	-10	-20	-11	-11	-10	-11	-15	-10	-12	-14	-15	-15	-15	-15	-15	-15	-15	-15	-16	-15	-19	-19	-16	-20	-20					
SEAQUEST 8010	0	1	4	2	2	2	3	2	3	0	0	-4	-5	-5	-5															
SEAQUEST 8012	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-1	-1	-2	-1	-4	-5	-3	-3	-4					
SHERWOOD DG350	0	1	1	1	2	2	2	2	2	1	1	2	2	2	2	1	1	1	1	2	0	0	1	0	0					
SPORTSWAY 1406	2	2	1	1	1	3	3	4	3	2	3	2	3	2	1															
SAS 2089	-3	-2	-3	-2	-2	-2	-2	-2	-2	-3	-2	-2	-2	-2	-1															

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX F1

MAXIMUM DEVIATIONS - DESCENDING AT 32°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	2	1	1	2	2	0	5	5	5	4	5	5	2	3	1	2	0	0	0	0	0	0	0	0	0					
TEKNA T-2600	2	0	0	0	0	0	0	0	0	0	2	1	6	2	4	3	4	3	1	3	2	0	0	0						
U.S. DIVERS 7044	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0															
U.S. DIVERS 7042	0	0	1	1	1	1	1	0	0	0	0	-1	-2	-3	-4															
U.S. DIVERS 7043	-1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0					
U.S. DIVERS 7045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-2	-1	-2	-3					
WHITE STAG 51246	-5	-5	-5	-5	-5	-5	-5	-6	-5	-6	-6	-6	-6	-7	-6															
WHITE STAG 51247	-10	-10	-10	-10	-9	-9	-3	-8	-9	-9	-10	-10	-10	-10	-9	-10	-10	-10	-11	-11	-11	-13	-8	-15	-15					

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX F2

MAXIMUM DEVIATIONS - ASCENDING AT 32°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	1	1	1	1	2	1	2	3	2	4	4	5	5	5																
DACOR LFG 150	5	4	4	4	5	5	5	5	5	5	5	5	0	7																
DACOR SFG 300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	1	1	1	2	2	4	
DACOR LFG 300	6	3	5	5	5	3	6	3	4	2	3	2	5	5	5	5	6	5	7	10	8	10	10	10	10	10	10	10	10	
FARRALLON 04-1610	-3	-2	-2	-1	-1	-2	-3	-3	-5	-4	-5	-5	-5	-5																
FARRALLON 04-1630	7	8	7	7	6	6	7	2	3	1	2	1	4	4	5	4	3	2	4											
FARRALLON 04-1620	0	2	5	5	5	5	5	3	3	3	6	2	2	2	2	2	2	2	2	2	2	2	1	1						
PARKWAYS 801900	1	1	2	2	2	2	3	3	2	2	2	3	3	2																
PRINCETON TECTONICS DG-10	4	5	4	5	5	5	4	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
SCUBAPRO 28-849	-1	-1	-2	-2	-3	-2	-2	-3	-3	-3	-3	-4	-4	-3																
SCUBAPRO 28-850	1	0	0	0	0	1	1	1	1	1	1	2	2	1	1	2	2	2	2	1	2	2	0							
SCUBAPRO 28-503	4	4	5	5	6	7	5	5	5	6	6	2	2	1	0	0	0	0	0	0	0	0	0	2						
SCUBAPRO 28-012	-1	0	0	0	0	0	0	0	-2	-2	-1	-3	-3	-3	-3	-2	-4	-6	-2	0	-3	-3	-3	-7	-1	-3	0	0	0	
SCUBAPRO 28-507	0	5	5	5	5	5	4	2	1	5	5	0	0	0	-2	-4	-5	-5	-8	0	-5	-3	-5	-9	-10	-2	-10	-5	-5	
SEAPRO DM-250	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-14	-15	-15	-15	-15	-15	-15	-13	-15	-20	-17						
SEAQUEST 8010	0	2	4	3	1	2	4	4	2	0	0	-3	-4	-4																
SEAQUEST 8012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	-2	0	-1	-1	-2	-4	-4						
SHERWOOD DG350	0	3	2	2	2	3	2	2	2	3	3	5	3	4	2	2	2	2	3	2	2	1	0	1						
SPORTSWAY 1406	2	1	1	1	1	2	2	3	3	2	2	1	1	3																
SAS 2089	-2	0	0	0	0	0	0	0	-1	-2	-2	-2	0	-1																

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX F2

MAXIMUM DEVIATIONS - ASCENDING AT 32°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	2	3	5	3	5	5	5	3	5	5	5	5	0	4	2	1	1	0	0	0	1	0	0	0						
TEKNA T-2600	2	2	1	1	0	0	0	0	2	2	2	3	6	7	8	8	7	4	8	9	8	7	1							
U.S. DIVERS 7044	2	2	2	2	1	1	2	1	0	0	0	0	0	0																
U.S. DIVERS 7042	0	0	1	0	1	1	1	0	0	0	0	-1	-2	-3																
U.S. DIVERS 7043	20	20	15	17	7	2	2	2	1	2	1	2	2	0	1	-2	0	0	0	0	0	0	0	0						
U.S. DIVERS 7045	0	0	1	1	1	1	2	2	2	2	0	2	2	2	2	1	2	0	2	3	2	0	0	0						
WHITE STAG 51246	-5	-5	-5	-5	-5	-4	-5	-5	-5	-5	-6	-6	-6	-6																
WHITE STAG 51247	-10	-10	-9	-10	-9	-9	-8	-8	-9	-9	-9	-8	-10	-10	-10	-10	-10	-10	-10	-10	-11	-12	-13	-15						

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX G1

MAXIMUM DEVIATIONS FOLLOWING DURABILITY TEST - DESCENDING AT 70°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	3	2	2	2	2	2	2	4	4	4	6	7	7	10	00															
DACOR LFG 150	7	7	7	7	7	8	8	8	9	10	10	11	12	00	00															
DACOR SFG 300	1	1	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	1	2	1	1	2	6	7	8	9	10	5	5
DACOR LFG 300	7	4	3	3	3	3	3	3	4	6	6	7	7	8	8	8	9	10	10	10	10	10	10	11	11	11	12	15	15	00
FARRALLON 04-1610	0	0	0	1	1	0	0	0	0	1	-1	-1	-1	0	-1															
FARRALLON 04-1630	2	2	2	2	1	1	0	1	1	0	0	0	0	0	0	0	1	1	1	1										
FARRALLON 04-1620	1	1	3	2	-2	3	8	3	5	4	5	5	6	3	6	3	5	4	5	5	5	4	6	4	5					
PARKWAYS 801900	0	0	0	0	0	0	1	0	1	1	1	1	1	7	2															
PRINCETON TECTONICS DG-10	2	2	2	1	4	1	0	0	0	0	0	0	-1	-2	-1	-1	-1	-1	-1	-5	-1	-2	-2	-5	0	7				
SCUBAPRO 28-849	0	0	-1	-2	-2	-1	-3	-4	-5	-8	-6	-4	-4	-3	-2															
SCUBAPRO 28-850	-1	0	0	0	0	0	1	1	1	1	1	2	2	3	2	2	3	3	3	3	3	3	2							
SCUBAPRO 28-503	2	2	4	3	2	4	4	1	0	0	0	0	0	0	-1	-4	-5	-6	-9	-10	-10	-10	-10	-10	-10					
SCUBAPRO 28-012	0	0	1	2	1	1	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	3	4	5	5	5
SCUBAPRO 28-507	0	1	1	0	0	0	0	0	0	0	0	-5	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
SEAPRO DM-250	-10	-1	-1	-1	-1	0	-1	-1	-1	-4	-2	-4	-2	-5	-3	-3	-4	-5	-5	-5	-6	-5	-6	-5	-6	-5	-7			
SEAQUEST 8010	0	2	4	3	3	4	4	4	4	3	2	-3	-2	0	0															
SEAQUEST 8012	0	0	0	0	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	-1	-2	-1	-2	0					
SHERWOOD DG350	0	2	2	2	2	5	4	5	5	5	8	7	7	8	6	8	7	5	5	4	3	2	2	2	2					
SPORTSWAY 1406	3	2	2	2	2	2	2	2	3	2	2	1	1	1	0	0														
SAS 2089	-1	-1	0	0	0	0	0	1	1	0	0	0	0	0	0															

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX G1

MAXIMUM DEVIATIONS FOLLOWING DURABILITY TEST - DESCENDING AT 70°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	-1	-1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	-2	-2	-2	-1	-3	-2	-3	-4	0					
TEKNA T-2600	0	-1	-1	-1	-2	-3	-2	-2	-2	-1	0	0	0	0	0	0	0	0	0	0	0	0	-2	0						
U.S. DIVERS 7044	1	1	2	2	2	2	2	2	2	2	1	1	0	2	0															
U.S. DIVERS 7042	0	0	1	1	1	1	1	1	1	1	0	-1	-2	-2	-4															
U.S. DIVERS 7043	-1	0	0	0	1	0	2	1	2	1	2	2	2	2	4	2	3	2	2	2	2	1	2	1	2					
U.S. DIVERS 7045	0	0	2	1	1	2	2	2	2	2	3	2	2	2	2	2	3	2	2	2	2	1	2	1	2					
WHITE STAG 51246	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0															
WHITE STAG 51247	-10	-1	-1	-1	-1	0	0	0	-1	-1	-1	-1	-3	-3	-4	-4	-5	-5	-5	-5	-6	-6	-6	-6	-8					

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX G2

MAXIMUM DEVIATIONS FOLLOWING DURABILITY TEST - ASCENDING AT 70°F

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
DACOR SFG 150	3	3	2	3	3	3	4	4	6	6	7	8	10	10																
DACOR LFG 150	8	9	7	8	9	9	9	9	10	10	10	12	12	00																
DACOR SFG 300	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	5	5	7	7	8	8	8	2	10	
DACOR LFG 300	7	7	7	6	6	6	6	7	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	13	15	
FARRALLON 04-1610	0	0	0	1	1	1	1	0	0	0	0	0	0	0																
FARRALLON 04-1630	3	3	3	2	2	3	2	1	1	1	1	2	2	2	2	2	2	2	3											
FARRALLON 04-1620	1	1	5	3	-2	4	8	4	8	4	7	6	7	7	6	6	7	7	7	7	7	7	7	6						
PARKWAYS 801900	0	0	0	0	0	1	1	2	2	2	2	2	2	2																
PRINCETON TECTONICS DG-10	2	3	3	2	4	4	2	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0						
SCUBAPRO 28-849	0	0	0	0	0	0	0	-4	14	7	1	-3	-2	-2																
SCUBAPRO 28-850	0	0	2	1	1	3	3	3	3	3	3	4	4	4	4	4	5	4	4	5	5	4								
SCUBAPRO 28-503	2	2	3	5	5	5	5	4	4	2	2	2	1	1	0	0	0	0	0	0	0	0	-1	-5						
SCUBAPRO 28-012	1	2	2	1	1	2	3	4	4	2	1	1	1	1	1	1	2	2	2	3	5	4	4	5	5	5	5	5	5	
SCUBAPRO 28-507	1	1	2	2	2	1	0	0	0	0	0	0	0	-2	-3	-4	-5	-3	-2	-1	-1	-1	0	0	0	-2	-5	-5	-10	
SEAPRO DM-250	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	-1	0	-1	-1	-2	-3						
SEAQUEST 8010	2	4	4	4	4	4	5	4	5	4	2	-1	0	1																
SEAQUEST 8012	0	0	1	2	2	3	4	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0						
SHERWOOD DG350	1	2	2	2	6	5	5	6	6	8	8	8	8	8	8	8	7	7	7	7	5	4	6	4						
SPORTSWAY 1406	2	1	1	2	2	2	1	2	1	0	0	0	0	0																
SAS 2089	0	0	0	0	2	2	4	3	2	1	1	1	0																	

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX G2

MAXIMUM DEVIATIONS FOLLOWING DURABILITY TEST - ASCENDING AT 70°F (Continued)

GAUGE/ NUMBER	DEPTH (FEET)*																													
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
SAS 2069	0	0	0	0	2	2	4	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0						
TEKNA T-2600	0	0	0	1	-1	-1	-1	0	0	0	0	1	1	1	2	2	2	0	2	3	6	5	5							
U.S. DIVERS 7044	2	2	1	2	2	2	2	2	2	2	1	1	1	0																
U.S. DIVERS 7042	0	0	0	1	1	1	1	1	1	1	0	0	-2	-2																
U.S. DIVERS 7043	0	0	0	0	0	0	0	1	1	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2						
U.S. DIVERS 7045	0	0	1	1	1	1	2	2	1	2	3	3	3	3	3	3	2	2	2	2	2	2	3	3						
WHITE STAG 51246	0	0	0	0	0	0	0	0	0	0	0	0	0	0																
WHITE STAG 51247	-10	-1	-1	-1	-1	0	0	0	0	0	0	-1	-1	-2	-3	-4	-5	-5	-5	-5	-5	-5	-5	6						

* ALL GAUGES INDICATED 0 FSW WHEN ON THE SURFACE. CONSEQUENTLY, DATA COLUMN FOR 0 FSW IS EXCLUDED.

APPENDIX H

DIVER QUESTIONNAIRE

Depth Gauge	Model #	Readability Rating			
		Poor	Fair	Good	Excellent
(1) SEA QUEST:	8010				
	8012				
(2) PARKWAY:					
(3) FARALLON:	04-1610				
	04-1620				
	04-1630				
(4) SEL-PAC:	SDG-350				
(5) TEKNA:	T-2600				
(6) WHITE STAG:	51246				
	51247				
(7) SAS:	2089				
	2069				
(8) DACOR:	LFG 150				
	LFG 300				
	SFG 150				
	SFG 300				
(9) SPORTSWAYS:	1406				
(10) SCUBAPRO:	28-849				
	28-850				
	28-012				
	28-507				
	28-503				
(11) U.S. DIVERS:	7042				
	7043				
	7044				
	7045				
(12) SEA PRO:	DM 150				
	DM 250				

DIVER'S NAME: ______________________________

RATE/NEC: ______________________________

TYPE OF DIVE: DAY __________
NIGHT __________

SIGNATURE: ______________________________